THE PREVENTION AND TREATMENT OF DISC HERNIATION

FIELD OF INVENTION

A method of preventing and nonsurgically treating disc herniation.

FIELD OF THE INVENTION

The first objective is to prevent spinal disc herniation in humans and animals.

The second objective is to effectively treat and manage spinal disc herniation in humans and animals.

The third objective is to optimize the quality of life and standard of living of humans and animals.

All humans and most animals, inevitably, suffer low back pain and related disorders. Cervical, thoracic and lumbosacral disc herniations are extremely common and the incidences of disc herniation are increasing in U.S.A. Disc herniation and related disorders afflict immense acute and chronic pain, suffering, extreme debilitations and loss of productivities in individuals. Furthermore, said afflictions mostly occurred in individuals in their prime and most productive years of life.

Said disc herniations in said individual are heretofore poorly understood. Consequently, the prevention of said herniations are not available and nonsurgical treatments and managements have been random, ineffective and, in some instances, detrimental. Consequently, exhausted of options, patients having endured pain, suffering and neuromusculoskeletal disorders and deficits were forced to undertake surgery - albeit poor option - of their disc and only to endure and suffer more chronic pain, long-term

rehabilitation, changes of life styles, loss of productivities and increased absenteeism. Eventually, many will have repeated low back surgeries and said sequelae.

In summary, the prevention of said disc herniation is heretofore unavailable and all current treatments and managements of said disc herniation are random, ineffective or unnecessary, and, worse, some are detriment to individuals.

Through the research of this physician applicant, the present invention provides a method of and means for effectively preventing and treating intervertebral disc herniation in human and animal spines. Humanity will immensely benefit from the present invention.

SUMMARY OF THE INVENTION

Spinal disc herniations are extremely common and debilitating in individuals. Said disc herniations are heretofore poorly understood and consequently patients are needlessly subjected to surgery of the discs.

The present invention comprises a method and a data means for preventing and treating spinal disc herniations in humans or animals. The method comprises a discovery that the torques, forces, stresses, strains, sprains imposed on a human spine, pelvis, the spinal and pelvic components result in the bulging and/or herniation of an intervertebral disc or a plurality of intervertebral discs in said spine. The present invention then provides a formula or a plurality of formulas for the treatments of the soft tissues producing or involving with said disc herniation. Furthermore, the present invention provides a data means for predicting or estimating the risks, incidences and propensity towards said disc herniation in said individuals.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention comprises a method and a means for preventing and treating cervical, thoracic, lumbosacral intervertebral disc herniations and related disorders in a human or an animal spine.

The method comprises a discovery that the torques, forces, stresses, strains, sprains imposed on a human spine, pelvis, the spinal and pelvic components such as, but not limited to, intervertebral muscles, muscles originating from and inserting on the spine and pelvis, ligaments, intervertebral discs, blood vessels, nerves and joints result in the bulging and/or herniation of an intervertebral disc or a plurality of intervertebral discs in said spine. Moreover, said herniation is not a random process. In other words, there exists a causal relationship between said phenomena, the kinesiology and physiology including the contractility, tensiles, pulls and lengths of said intervertebral muscles and muscles originating from and inserting on the spine, pelvis and legs and said herniation or herniations.

For example, in brief, said disc herniation is a consequence of an imbalance or a poor kinesiologic and biomechanic interactions between a plurality of muscle groups such as, but not limited to, the intervertebral muscles and hip flexors and extensors and the deconditioning, weakness or imbalances of the abdominal and/or back muscles. Similar roles play by the ankle dorsiflexors and ankle dorsiextensors, ligaments or a combination thereof are also implicated.

In other words, the shortening and contracture of a specific muscle or a plurality of muscles relating to said spine and pelvis causes or cause said disc herniation. For example, the shortening, spasm, contracture or a combination thereof of the hip flexors cause said disc herniation. Alternatively, the shortening, spasm, contracture or a combination thereof of the hip extensors cause said disc herniation. In summary, the discovery provides the method of identifying the specific muscle or muscles in the muscle groups of intervertebral muscles, abdominal and back muscles, hip flexors, hip extensors,

ankle dorsiflexors and ankle dorsiextensors, and muscles inserting on and originating from said spine and pelvis and the short and long ligaments adaptable to produce or involve with said disc herniation.

As a result, the measurements of lengths of a muscle or a plurality of muscles originating from or inserting on said spine and pelvis, the short and long ligaments, measurements angles formed by the long axis of a muscle or a plurality of muscles and the long axis of said spine, measurements of a torque/force or torques/forces exerted by a muscle or a plurality of groups of muscles on said spine and pelvis serve to fulfill the objectives of the present invention and in the spirit of the invention and the scope of the claims.

The present invention comprises a data means for predicting or estimating the risks, incidences and propensity towards said disc herniation in said individuals. The data means relates to disc herniation or herniations in said individuals comprises the characteristics and activities of individuals in a population who had disc herniation or herniations. The data means comprises, first, a ratio or a plurality of ratio's of male: female, a plurality of ranges, averages, medians and standard deviations of ages of males and females who sustained or had disc herniation or herniations. Therefore, said data means for predicting or estimating the risks, incidences and propensity towards said disc herniation is adaptable to identify other individuals in a population who are prone, susceptible to or at risk for disc herniation.

For example, the data indicates that there are more males who are at higher risk or are more prone or more susceptible to disc herniation than females. One ratio in said data is such as, but not limited to, male:females = approximately 2:1. The data means further comprises, invididuals experiencing disc herniation having a range of ages of approximately 30 - 61 years, average age of approximately 40 years, median age of approximately 38 years and standard deviations of about 9. Although said numbers merely represent one of the preferred embodiments of said data means of the present

invention, it will be appreciated by those skilled in the art that variations of the values and parameters of said numbers in said ratio's, age ranges, averages or means, medians and standard deviations in males and females can and will be derived without departing from the spirit of the invention and the scope of the claims.

Similarly, said data means comprises data on the body types; measurements of lengths of a plurality of muscles originating from said spine; measurements of the lengths of a plurality of muscles inserting on said spine; measurements of lengths of a plurality of muscles originating from said pelvis; measurements of lengths of a plurality of muscles inserting on said pelvis; measurements of lengths of a plurality of muscles originating from the legs; measurements of lengths of a plurality of muscles inserting on the legs; measurements of a plurality of angles formed by the long axes of a plurality of muscles and the long axis of said spine; measurements of a pluraltiy of torques and forces exerted by a plurality of muscles on said spine; and types of physical activities and works. Without details, however, it will be appreciated by those skilled in the art that similar uses supra of said information will be had within the spirit of the invention and the scope of the claims.

The present invention provides a formula or a plurality of formulas for the treatments including the rehabilitation of the soft tissues producing or involving with said disc herniation. The treatments include the rehabilitation of the muscle, a plurality of muscles, ligament, a plurality of ligaments or a combination thereof that produces, produce, involves or involve with said disc herniation. For example, the rehabilitation includes elongation or stretching of a specific muscle, a plurality of specific muscles, ligament, a plurality of ligaments or any combination thereof. For example, the intervertebral muscles, hip flexors, hip extensors or any combination thereof are the candidates. Moreover, rehabilitation further includes the strengthening and conditioning of a specific muscle, a plurality of specific muscles, ligament, a plurality of ligaments or any combination thereof. Collorary, the rehabilitation includes the relaxation of a specific

muscle, a plurality of specific muscles, ligament, a plurality of ligaments or any combination thereof such as, but not limited to, the hip flexors.

Although the preferred embodiments of the present invention have been described, it will be appreciated by those skilled in the art that adaptations and variations of the methods and means may be made without departing from the spirit of the invention or the scope of the claims.